

**REMARKS**

Claims 23-43 are pending in the present application. Claims 23, 42, and 43 are independent claims.

**Rejections under 35 U.S.C. §103**

Claims 23-41 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Loeppert et al. (U.S. Patent 4,910,840) in view of Sprenkels et al. (U.S. Patent 4,910,840). Applicants respectfully traverse.

With regard to independent claim 23, Applicants submit that Loeppert et al. and Sprenkels et al., separately or in any proper combination, fail to disclose inner surfaces of the back-plate and said inner surface of the diaphragm being provided with a hydrophobic layer as recited in claim 23. The Examiner admits that Loeppert et al., on page 2 of the Office Action, fail to disclose inner surfaces of the back-plate and said inner surface of the diaphragm being provided with a hydrophobic layer.

The Examiner suggests that Sprenkels et al. make up for the deficiencies of Loeppert et al. Applicants do not agree.

Sprenkels et al. is directed to an electoracoustic transducer of the so-called "electret" type, and a method of making such a transducer. This type of microphone relies on the use of a permanently charged layer, which must be long-term stable, such as 5 years or more, to generate an electrical field between the diaphragm and the back-plate. The technical problem addressed

by Sprenkels et al. is to ascertain that electrical charge of the permanently charged electret layer arranged on the back-plate structure of the microphone is maintained even in the presence of water molecules near the back-plate as explained in Col. 7, line 63 to Col. 8, line 17. This problem is solved by Sprenkels et al. by depositing a HMDS based hydrophobic layer on the back-plate structure of the microphone, but not on the diaphragm. For at least this reason, Sprenkels et al. cannot disclose inner surfaces of the back-plate and said inner surface of the diaphragm being provided with a hydrophobic layer as recited in claim 23.

### **Motivation**

Further Applicants submit that there is no proper motivation to combine Loeppart et al. and Sprenkels et al.

On page 3 of the Office Action, the Examiner concludes that it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a hydrophobic layer to prevent reduced operating capabilities of the transducer due to humid or wet conditions.

Applicant respectfully submits that the only way Loeppart et al. and Sprenkels et al. could be combined is by utilizing Applicants' disclosure as a blueprint, which is not permitted. C.R. Bard, Inc. v. M3 Systems, Inc., 48 USPQ2d 1225 (Fed. Cir. 1998); Interconnect Planning Corp. v. Feio, 227 USPQ 543 (Fed. Cir. 1985); In re Rouffet, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998).

The CAFC has stated that the best defense against the subtle but powerful attraction of a hind-sight based obviousness analysis is rigorous application of the requirement for showing of the teaching or motivation to combine prior art references. In re Dembiczak, 50 USPQ2d 1614 (Fed. Cir. 1999). Evidence of a suggestion, teaching or motivation to combine may flow from the prior art references themselves, the knowledge of one of ordinary skill in the art, or in some cases, from the nature of the problem to be solved. Dembiczak, at 1617.

### ***The Prior Art References Themselves***

Although Sprenkels et al. discloses converting acoustic signal into electrical signals using an electret, Sprenkels et al. discloses absolutely nothing with respect to discharging an electrical field between a diaphragm and a back-plate as in Loeppert et al. Similarly, although Loeppert et al. discloses a condenser microphone, Loeppert et al. does not contemplate the use of an electret. As a result, applicant respectfully submits that neither Loeppert et al. nor Sprenkels et al. provide a motivation for combining one with the other.

### ***Nature of the Problem to be Solved***

Applicant respectfully submits that the problem being solved in Loeppert et al. is to maintain a bias voltage CMOS circuit to generate a bias voltage and thereby provide the required electrical field between the diaphragm and the back-plate. A presence of water molecules near the back-plate of this

microphone is not a discharge issue in the microphone because it will not be able to discharge of the electrical field between the diaphragm and the back-plate and thereby render the microphone inoperative.

Conversely, Sprenkels et al. rely on an electret condenser microphone with a silicon back-plate structure. This type of microphone relies on the use of a permanently charged layer, which must be long-term stable, such as 5 years or more, to generate an electrical field between the diaphragm and the back-plate. The technical problem addressed by Sprenkels et al. is to ascertain that electrical charge of the permanently charged electret layer arranged on the back-plate structure of the microphone is maintained even in the presence of water molecules near the back-plate as explained at Col. 7, line 63 to Col. 8, line 17. The presence of water molecules near the back-plate of this microphone is a discharge issue.

Applicants respectfully submit that the problems being solved by Loeppert et al. and Sprenkels et al. are completely different, which is evidence of the non-combinability of these two references.

### ***Knowledge of One of Ordinary Skill in the Art***

As suggested in Dembiczak, the final source for suggestion, teaching or motivation could be the knowledge of one of ordinary skill in the art. Regardless of the source, the Examiner is still required to provide actual evidence. It must be based on specific, objective evidence of record. In re Lee, 61 USPQ2d 1430 (Fed. Cir. 2002). Broad conclusory statements regarding the

teaching of multiple references, standing alone, are not evidence. Broad denials and conclusory statements are not sufficient to establish a genuine issue of material fact. Dembiczak at 1617.

The Examiner asserts that one of ordinary skill in the art would have modified Loeppert et al. as taught by Sprenkels et al. in order to provide a hydrophobic layer to prevent reduced operating capabilities of the transducer due to humid or wet conditions.

Applicants respectfully submit that microphone technologies in Loeppert et al. and Sprenkels et al. are so diverse, that one of ordinary skill in the art would not have been motivated to modify Loeppert et al. in view of the teachings of Sprenkels et al. based on the Examiner's broad conclusory statement that adding a hydrophobic layer would prevent reduced operating capabilities of the transducer due to humid or wet conditions.

Since the Examiner has failed to establish a proper motivation, either from the references themselves, by virtue of the nature of the problem being solved by the references, or by knowledge of one of ordinary skill in the art, Applicant respectfully submits that the Examiner has failed to establish a proper *prima facie* case of obviousness. Accordingly, reconsideration and withdrawal of this rejection is requested.

With regard to dependent claims 24-41, Applicants submit that claims 24-41 are allowable at least because they each depend from claim 23 which is allowable.

With regard to independent claims 42 and 43, Applicants submit that claims 42 and 43 include similar features as independent claim 1. Independent claims 42 and 43 are allowable at least for the reasons stated for independent claim 1.

Applicants respectfully request that the art grounds of rejection be withdrawn.

**CONCLUSION**

In view of the above amendments and remarks, reconsideration of the rejection and allowance of each of claims 23-43 is respectfully requested.


Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John A. Castellano at the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By

  
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